UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,671	12/15/1999	HUAI-RONG SHAO	MS1-438US	7956

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EXAMINER
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ART UNIT	PAPER NUMBER
2154	6

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 December 1999_.
2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-71_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-71_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _4_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1.   Claims 1-71 are pending in this application.

2.   The numbering of claims is not in accordance with 37 CFR 1.126 which requires the

original numbering of the claims to be preserved throughout the prosecution. When claims are

canceled, the remaining claims must not be renumbered. When new claims are presented, they

must be numbered consecutively beginning with the number next following the highest

numbered claims previously presented (whether entered or not).

        Misnumbered claims 22-72 have been renumbered as 21-71, and the affected

dependency of dependent claims are adjusted accordingly.

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

4.   Claims 1-71 are rejected under 35 U.S.C. 102(e) as being anticipated by Aharoni et al.

(US 6,014,694).

5.   As to claim 1, Aharoni discloses the invention as claimed including a method comprising:

receiving a data bitstream that includes object-based media information (col. 2, lines 31-32; and

col. 8, lines 56-63); associating portions of the object-based media information with a plurality a

of different transmission priority levels (col. 2, lines 29-31); and selectively transmitting the

portions of the object-based media information to over a network (col. 2, lines 31-35) configured

to provide differential services based at least on the plurality of different transmission priority

levels (inherent in col. 7, lines 39-42).

6.   As to claim 24, the claim is rejected for the same reasons as claim 1 above. In addition,

Aharoni discloses an arrangement comprising: a server device (18, Figs. 1 and 2) configured to

provide a data bitstream that includes object-based media information having portions of the

object-based media information (col. 2, lines 31-32; and col. 8, lines 56-63) associated with a

plurality of different transmission priority levels (col. 2, lines 29-31); at least one client device

(22, Fig. 1); and at least one communication network operatively coupled between the server

device and the client device (20, Fig. 1).

7.   As to claim 47, Aharoni discloses the invention as claimed including a method for use in

a communications node within a network, the method comprising: receiving data that includes

object-based media information (col. 2, lines 31-32; and col. 8, lines 56-63) that is a packetized

according to different transmission priority levels (col. 2, lines 29-31); and selectively outputting

the portions of the object-based media information to based at least on the plurality of different

transmission priority levels (col. 2, lines 31-35).

8.   As to claim 65, Aharoni discloses the invention as claimed including a system

comprising: at least one client device (22, Fig. 1) configured to receive prioritized video object-

based data packets (col. 2, lines 29-35) and output control requests relating to a video object

(col. 7, lines 62-67); at least one server device configured to output prioritized object-based data

packets representing the video object (14, Fig. 1), the prioritized object-based data packets

being prioritized based at least on part on the type of data as selected from a group comprising

control data, shape data, motion data, and texture data (col. 9, lines 57-64); and at least one

video transmission agent (VTA) coupled to receive the prioritized object-based data packets

from the server device (18, Figs. 1 and 2) and the control requests from the client device (34,

Fig. 2), and to selectively output at least a portion of the received prioritized object-based data

packets to the client device based in response to the control requests (col. 2, lines 31-35; and

col. 7, lines 63-67).

9.   As to claim 70, the claim is rejected for the same reasons as claim 1 above. In addition,

a computer-readable medium having computer-executable instructions for performing the steps

recited in Claim 1 is inherent in Aharoni's disclosure..

10.   As to claim 71, the claim is rejected for the same reasons as claim 47 above. In addition,

a computer-readable medium having computer-executable instructions for performing the steps

recited in claim 47 is inherent in Aharoni's disclosure.

11.   As to claims 2-4, 25-27, and 48-49, Aharoni discloses the data bitstream includes

object-based media information for a single object, the single object is a video or audio object

(inherent in col. 7, lines 7-11; and col. 8, lines 54-63).

12.   As to claims 5 and 28, Aharoni discloses placing the portions of the object-based media

information in a plurality of data packets, wherein each data packet is associated with a specific

transmission priority (inherent in col. 3, lines 50-59).

13.   As to claims 6 and 29, Aharoni discloses at least one of the plurality of data packets includes non-contiguous portions of data from within the data bitstream (inherent in Figs. 5, 6, and 7; in Fig. 8).

14.   As to claims 7 and 30, Aharoni discloses causing the network to selectively halt the transmission of a first data packet carrying object-based media information that is associated with a first priority level prior to halting the transmission of a second data packet carrying object-based media information that is associated with a second priority level prior if the second priority level is higher than the first priority level, should a need arise while transmitting the first and second data packets (inherent in col. 2, lines 6-7; col. 7, lines 35-36, col. 9, lines 13-15, 57-64).

15.   As to claims 8, 31, and 50, Aharoni discloses different substantially guaranteed Quality of Service (QoS) transmission capabilities for different transmission priority levels (inherent in col. 7, lines 39-42).

16.   As to claims 9, 32, and 51, Aharoni discloses the object-based media information includes a plurality of different types of video frame layers selected from a group that includes Intra (I) coded frame layers, Predicted (P) frame layers, Bi-directionally (B) predicted frame layers, Intra (I) coded frame enhancement layers, Predicted (P) frame enhancement layers, and Bi-directionally (B) predicted frame enhancement layers (inherent in col. 3, lines 1-8; col. 8, line 44 to col. 10, line 65).

17.   As to claims 10, 23, and 52, Aharoni discloses setting the transmission priority levels

based at least in part on the type of video frame layer (col. 9, lines 57-64).

18.   As to claims 11, 34, and 53, Aharoni discloses causing Intra (1) coded frame layer data

to have a higher transmission priority level than Predicted (P) frame layer data; causing

Predicted (P) frame layer data to have a higher transmission priority level than Bi-directionally

(B) predicted frame layer data; causing Bi-directionally (B) predicted frame layer data to have a

higher transmission priority level than Intra (I) coded frame enhancement layer data; causing

Intra (I) coded frame enhancement layer data to have a higher transmission priority level than

Predicted. (P) frame enhancement layer data; and causing Predicted (P) frame enhancement

layer data to have a higher transmission priority level than Bi-directionally (B) predicted frame

enhancement layer data (inherent in col. 7, lines 16-19; col. 9, line 57 to col. 10, line 48).

19.   As to claims 12, 25, and 54, Aharoni discloses a plurality of different types of video

object information selected from a group that includes control information, shape information,

motion information and texture information (col. 9, lines 16-56).

20.   As to claims 13, 36, and 55, Aharoni discloses setting the transmission priority levels

based at least in part on the type of video object information (col. 9, line 57 to col. 10, line 20).

21.   As to claims 14-17,37-40, and 56-59, Aharoni discloses causing at least a portion of the

control information to have a higher transmission priority level than at least a portion of the

shape information, causing at least a portion of the shape information to have a higher

transmission priority level than at least a portion of the motion information, causing at least a

portion of the motion information to have a higher transmission priority level than at least a

portion of the texture information, and causing at least a portion of the texture information to

have a higher transmission priority level than at least a portion of the shape information

(inherent in col. 7, lines 16-19; col. 9, line 57 to col. 10, line 48).

22.   As to claims 41 and 60, Aharoni discloses the object-based media information includes a

plurality of different types of video frame layers selected from a group that includes Intra (I)

coded frame layers, Predicted (P) frame layers, Bi-directionally (B) predicted frame layers, Intra

(I) coded frame enhancement layers, Predicted (P) frame enhancement layers, and Bi-

directionally (B) predicted frame enhancement layers; the object-based media information

further includes a plurality of different types of video object information selected from a group

that includes control information, shape information, motion information and texture information;

and wherein associating portions of the object-based media information with the plurality of

different transmission priority levels further includes setting the transmission priority levels

based at least in part on the type of video frame layer and the type of video object information

(inherent in col. 7, lines 16-19; col. 9, line 57 to col. 10, line 48).

23.   As to claims 19, 42, and 61, Aharoni discloses setting the transmission to priority levels

based at least in part on the type of video frame layer and the type of video object information

further includes: setting control information to a class 0 transmission priority level; setting shape

information and texture DC information of at least one Intra (I) coded frame layer to a class 1

transmission priority level; setting texture AC information of the Intra (I) coded frame base layer

to a class 2 transmission priority level; setting shape information and motion information of at

least one Predicted (P) frame layer to a class 3 transmission priority level; setting texture

information of the Predicted (P) frame layer to a class 4 transmission priority level; and setting

shape information, motion information and texture information of at least one Bi-directionally (B)

predicted -frame base layer to a class 5 transmission priority level, and wherein the class 0

transmission priority level is higher than the class I transmission priority level, the class 1

transmission priority level is higher than the class 2 transmission priority level, the class 2

transmission priority level is higher than the class 3 transmission priority level, the class 3

transmission priority level is s higher than the class 4 transmission priority level, and the class 4

transmission priority level is higher than the class 5 transmission priority level (inherent in col. 7,

lines 16-19; col. 9, line 57 to col. 10, line 48; Figs. 4, 4, 6, 7, and 8).

24.   As to claims 20-21, 43-44, and 62, Aharoni discloses receiving at least one down-stream

preference with regard to the object-based media information; and selectively transmitting at

least one of the portions of the object-based media information over the network based on the

down-stream preference, and selectively halting the transmission of at least one of the portions

of the object-based media information over the network based on the down-stream preference

(inherent in col. 31-42,55-65; and col. 7, lines 39-42).

25.   As to claims 22, 45, and 63, Aharoni discloses the data bitstream includes MPEG-4

encoded video data (col. 6, lines 56-60).

26.   As to claims 23, 46, and 64, Aharoni discloses the network is an Internet Protocol (IP)

based network (col. 2, lines 10-15).

27.   As to claim 66, Aharoni discloses a network operatively coupled between the server

device and the client device and wherein the video transmission agent (VTA) is operatively

configured within the network (Figs. 1 and 2).

28.   As to claim 67, Aharoni discloses providing differential services to the prioritized

object-based data packets (inherent in col. 7, lines 39-42), such that prioritized object-based

data packets having lower priority levels are selectively dropped should the network become

congested (col. 7, lines 35-36; and col. 2, lines 6-7).

29.   As to claims 68 and 69, Aharoni discloses the invention as claimed including a

computer-readable medium having a data structure, comprising: a first field containing

identifying data associated with a portion of a data bitstream that represents a video object (e.g.

60, Fig. 4); at least one second field that is derived from the first field and includes data

representing object-based video information for the video object that has been classified as

having a specific transmission priority level based on at least one type of object-based video

information selected from a group comprising control information, shape information, motion

information, and texture information (e.g. LEVEL 1 of KEY FRAMR, Fig. 5).

30.   As to claim 69, Aharoni discloses a third field containing identifying data associated

with the specific transmission priority level of the data in the second field (inherent in e.g. LEVEL

1 of KEY FRAMR, Fig. 5).

31.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Fukushima et al. (US 6,587,985) ; Boyce (US 6,490,705) ; Lackman et al. (US

6,188,670); Khaunte (US 6,546,017); Borella et al. (US 6,587,433); Ellington, Jr. et al.

(US 6,175,569); Kamel et al. (US 6,078,998); Lauffenburger et al. (US 6,661,774); Davie

(US 6,320,845); Yee et al. (US 6,147,980); Proctor et al. (US 6,125,110); Ruszczyk (US

6,205, 150); Milliken et al. (US 6,526,062); Kilkki et al. (US 6,549,938); Olsson et al. (US

6,577,596); Bayrakeri (US 6,185,602); Rhee (US 6,104,757); Fischer et al. (US

6,360,075); and Steer et al. (US 6,633,564);

32.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Nabil M El-Hady whose telephone number is (703) 308-7990. The

examiner can normally be reached on 9:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Follansbee can be reached on (703) 305-8498. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 25, 2004

Nabil El-Hady, Ph.D, M.B.A.
Primary Patent Examiner
Art Unit 2154